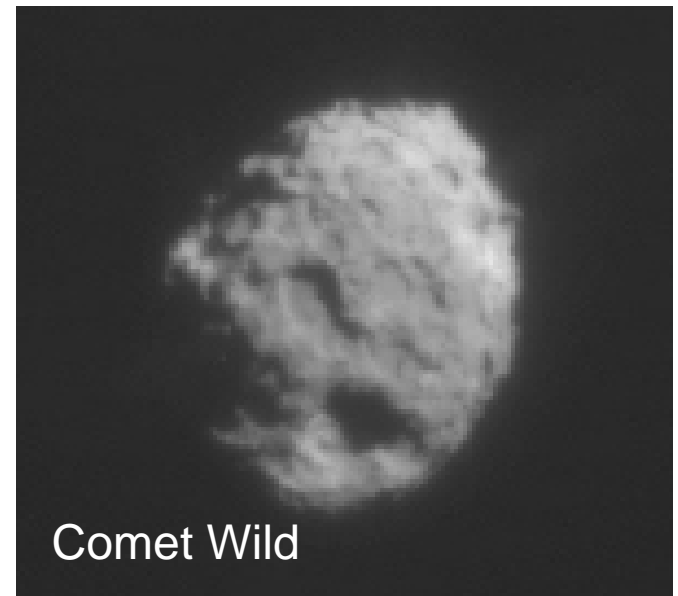


Wetumpka impact crater

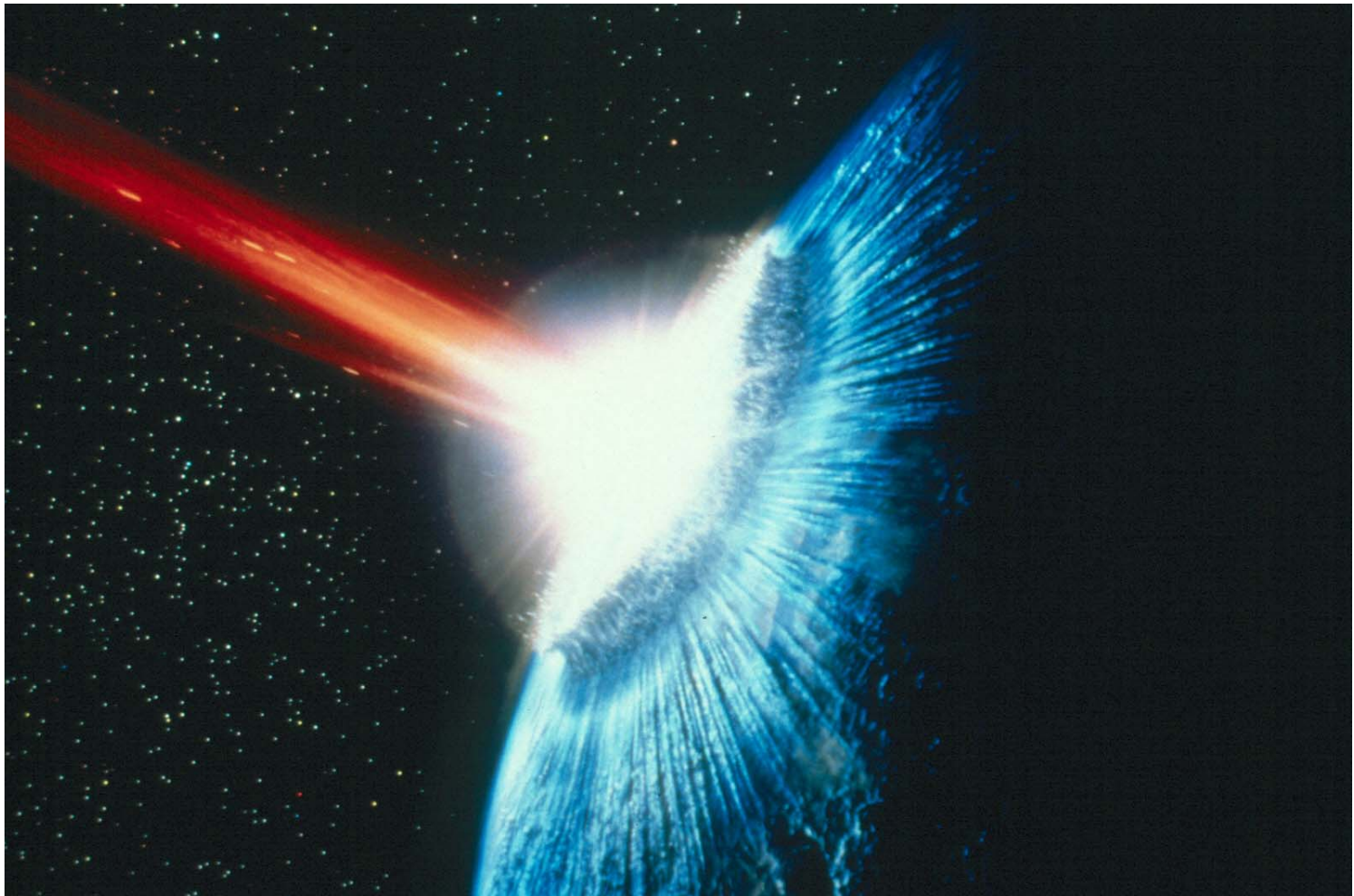
History and origin



Asteroids and comets travel around the Sun at great velocity in orbits that bring them near the Earth ... sometimes near enough to strike the Earth with great energy ...



The impact of an asteroid or comet causes damage to the Earth's crust resulting in an impact crater ...



Impact craters look like a circular or semi-circular rim of hills.

The map at right shows Wetumpka impact crater (a semi-circular rim of hills) next to the Coosa River.



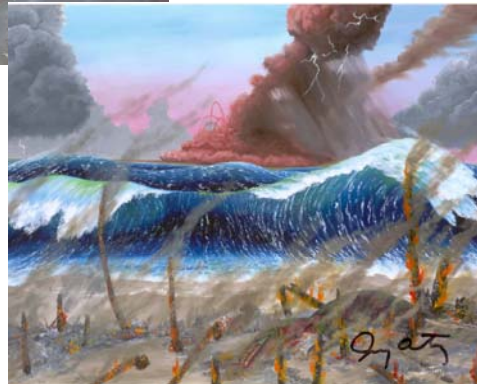
The following sequence of slides shows the order of events that scientists have uncovered in the history of Wetumpka impact crater.



1



2



3

4



5

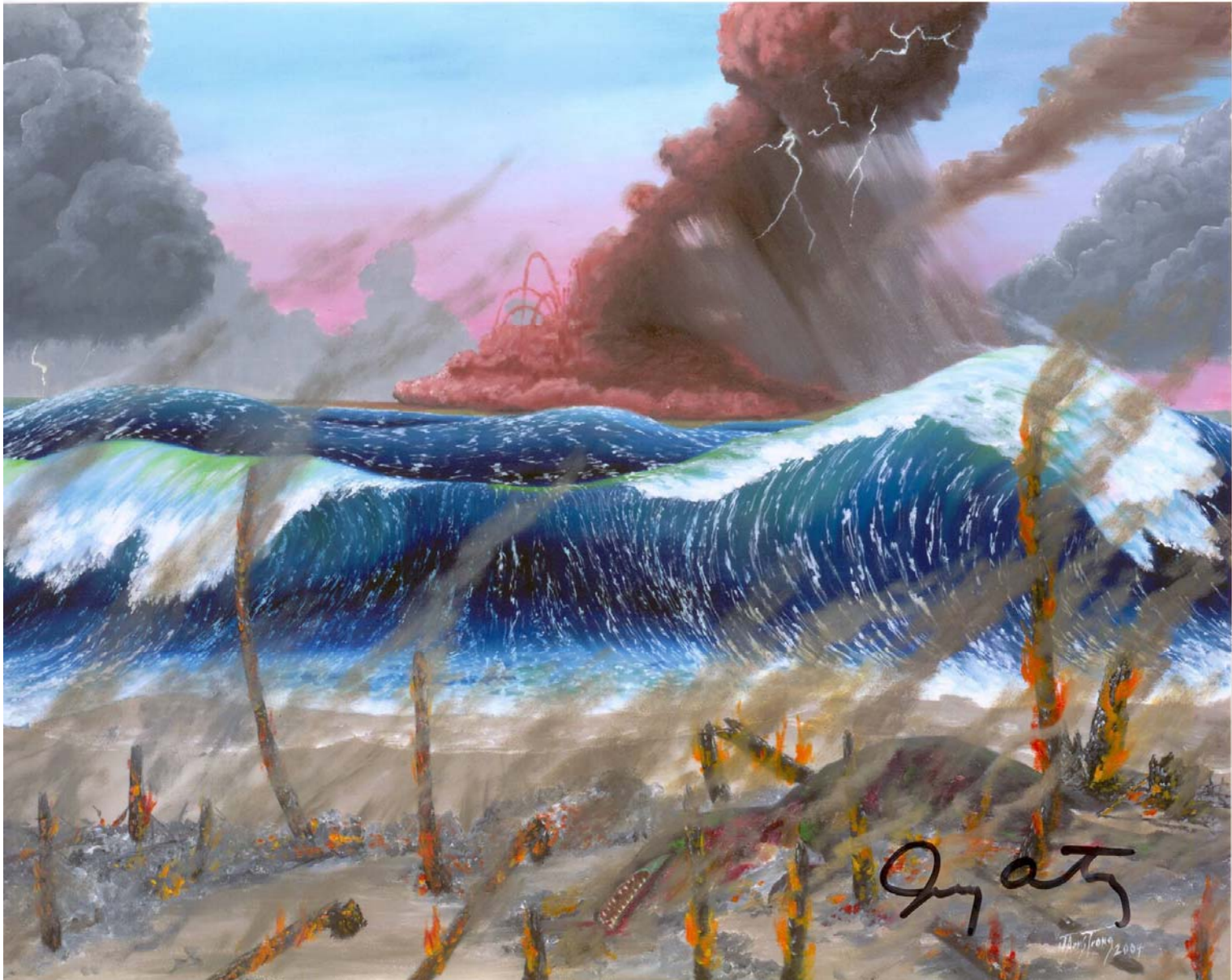




A marine reptile bites a fish the Gulf of Mexico waters that covered central Alabama about 83 million years ago when the Wetumpka asteroid streaked through the sky.



A small tyrannosaurid dinosaur is beachcombing on the island shoreline just north of Wetumpka when he witnesses the asteroid or comet impact 15 miles offshore.



Heat from the blast has set the shoreline woods on fire and now the tsunami wave from impact arrives onshore as the impact crater forms at sea.



After impact, the rim stood above sea level and excluded sea water, but eventually weaker southwestern rim collapsed causing a catastrophic flood across the interior.



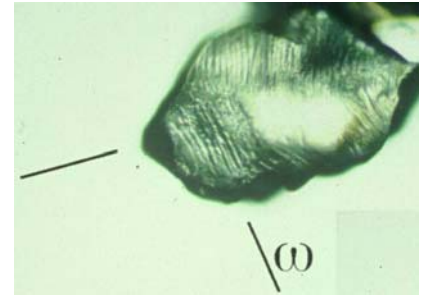
View from the southwest, looking northeast at the sea that filled the crater after Part of the rim collapsed. Flying reptiles are looking for fish in the shallow sea.

Wetumpka is shaped like an impact crater,
but how do we know that this feature is the
spot where an asteroid or comet hit the Earth?

Drilling down to 685
feet at crater center
Allowed scientists to
recover minerals that
had been shocked by
sudden force of
pressure from the
asteroid or comet
impact.



Drilling during July 1998.



Shocked quartz



Box of core.

Shocked minerals like the shocked quartz from Wetumpka are found only inside impact craters and the craters made by nuclear weapons tests.

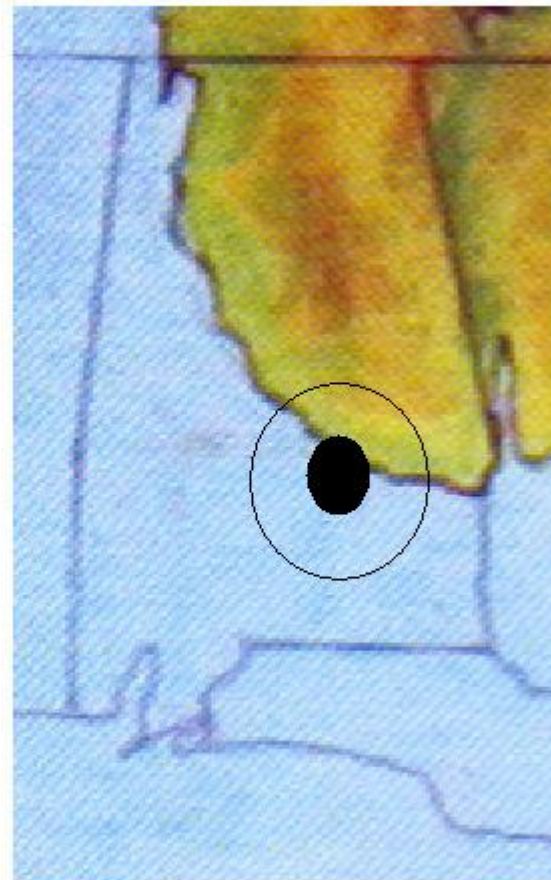


Scientists estimate that the energy released by the Wetumpka impact event was over **175,000 times** the energy of the nuclear bomb detonated at Hiroshima, Japan, in 1945.



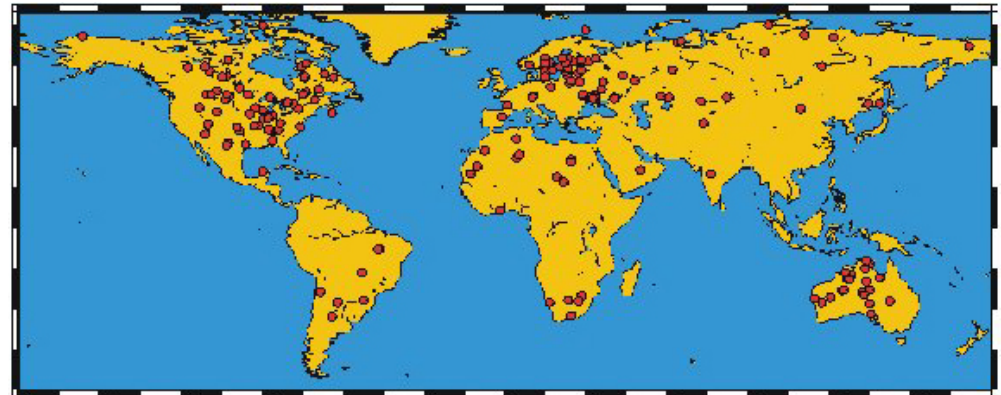
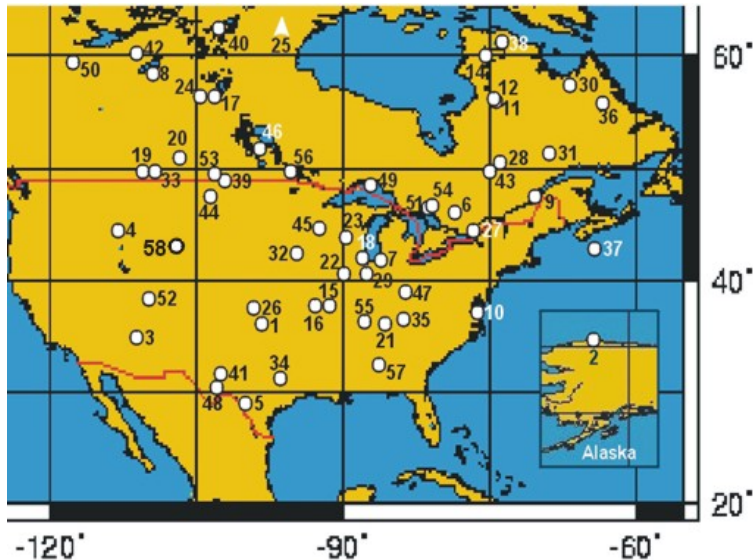
The energy released by the Wetumpka impact event is estimated to have been the equivalent of about **2.3 billion tons of TNT.**

The dark spot shows the area of total destruction around the crater and the thin circle line shows the extent of heavy damage and death. The impact affected both land and sea.

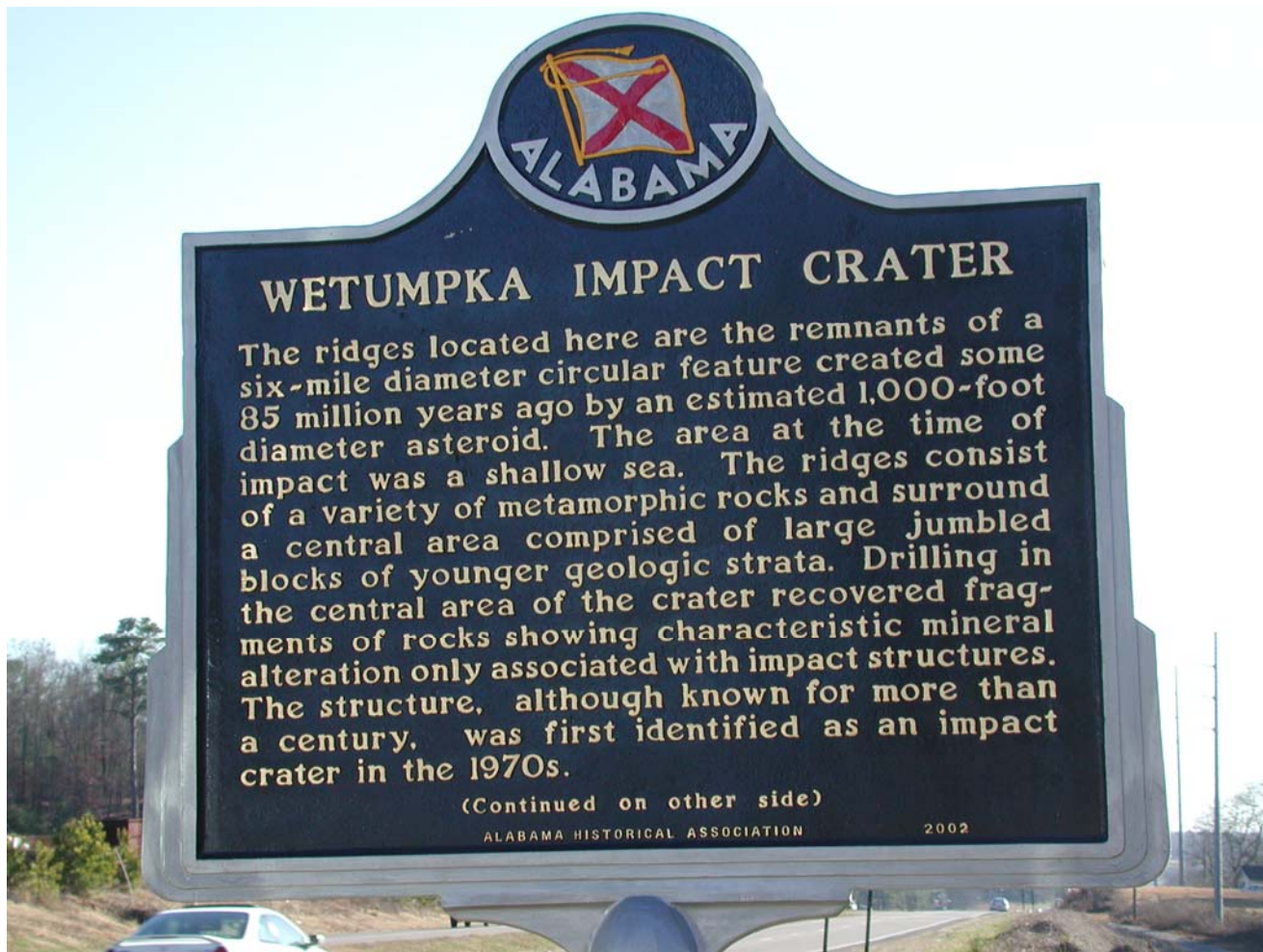


In 2002, Wetumpka was added to the Earth Impact Database, which is an international list of proven impact craters.

Wetumpka is one of 59 recognized impact craters in North America. About 200 craters are recognized worldwide.



<http://www.unb.ca/passc/ImpactDatabase/>



In 2002, the Alabama Historical Association placed an historical marker at Wetumpka impact crater, site of Alabama's greatest natural disaster.